

THE
SATURDAY MAGAZINE.

VOL. I.—NO. 2.

Philadelphia, July 14, 1821.

Miscellany.

FROM THE LONDON LITERARY GAZETTE.

A Selection of Irish Melodies (with Symphonies and Accompaniments, by H. R. Bishop) and characteristic Words. By Thomas Moore. Eighth Number.

The eighth number of these popular melodies has just issued from the press, and we shall allow ourselves the *délassement* of a review of them, though perhaps our fair and our young friends will rather be the parties to thank us for it, than those who are learned and more ancient. We wish we could propitiate the latter by adding specimens of the music, which is old, though the words are new; but being unable with our typographical establishment, to present any thing that can be made the subject of antiquarian research or classical disquisition, we must e'en throw ourselves on their mercy, and beg of them to pass over those quoted songs in the manner most agreeable to themselves, or hum them over in the way least disagreeable to their neighbours.

As in the preceding numbers, we have here twelve melodies and four harmonized airs. Some of them are very pretty, and others of no peculiar merit; but we shall leave the music to the superior criticism of the *grand piano*, and say all that *we* have to say about the words. Mr. Moore is justly esteemed to be the sweetest lyrist of our day. There is either point or pathos in almost every verse he writes; and even when the former is but a conceit, and the latter a little affectation, we still generally find him above the compass of other songsters. The only exceptions to this rule, seem to arise when this author plunges into politics, and tries to wed harmony to jangling. Instead of effecting this marriage, the epithalamium sinks into the veriest Irish howl of death; and all the common place patriotism about deserted halls, and soulless tyrants, and crushed lands, &c. &c. &c. is poured into our ears instead of the captivating breathings of the lovely Muse. We should rejoice that no man of Mr. Moore's genius ever profaned his pen, especially in poetry, with the bitterness of party ranklings, or the malignancy of factious curses.* In this

* A composition of this sort, admirably and powerfully written, against the Neapolitan Carbonari, has been much spoken of; and is (abating its personality,) humorously ridiculed in a parody addressed to T. B. or Tom Brown in the Cork Mercantile Chronicle, from which we transcribe some of the stanzas.

Dear Tom, I have read with unsated delight,
Your lines upon Naples, so valiant and civil,

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style, the words to "*I would rather than Ireland*," (page 79,) and "*Macfarlane's Lamentation*," may be viewed as neither bringing reputation to Mr. Moore, nor being congenial to this collection of melodies. The triteness of the sentiments and sameness of the versification, are alike wearisome. But we turn to better themes:—the following is very simple and tender, and the tune beautiful.

SAIL ON, SAIL ON.

AIR—*The Humming of the Ban.*

Sail on, sail on, thou fearless bark—
 Wherever blows the welcome wind,
 It cannot lead to scenes more dark,
 More sad than those we leave behind.
 Each wave that passes seems to say
 "Though death beneath our smile may be,
 Less cold we are, less false than they,
 Whose smiling wreck'd thy hopes and thee."
 Sail on, sail on, through endless space—
 Through calm—through tempest—stop no more;
 The stormiest sea 's a resting place
 To him who leaves such hearts on shore.
 Or,—if some desert land we meet,
 Where never yet false-hearted men
 Profaned a world, that else were sweet—
 Then rest thee, bark, but not till then.

The well known air of Paddy O'Rafferty is likely to be still oftener sung, with these its new bacchanalian recommendations.

Where you pitched the poor Patriots who ran from the fight,
 To that very legitimate monarch—the Devil.
 But easy, dear Tom,—do not be in a fret,
 Leave off for a while your poetical capers;
 In the whisk of a mill-stone, I'll show you as yet
 They had very good reason to take to their scrapers.
 Perhaps the poor rogues in their cause may advance,
 That the Austrians are dogs who wont listen to reason;
 Who think that a sword, or a musket, or lance,
 Is sufficient to cure quiet people of treason.
 Who think that harangues on "the march of the mind,"
 And such lillubulero, are answered at large,
 By "a blast of a bugle breath'd free to the wind,"
 And that terrible all-sounding little word—"Charge!"
 With these who would argue?—who'd waste any wit
 On such obstinate pudding-head rascals as these?
 Methinks it were better in peace to submit,
 Than be spitted like turkies, or pepper'd like geese.
 No, no—you exclaim—they should die in the fray,
 Ere they bowed to the beck of the diadem'd crew:
 Ah, Tom, these are things very easy to say,
 But, curse it—they're not quite as *easy* to do.
 "Aye, down to the dust with them, slaves as they are,"
 Is a very neat line, and 'tis very well spelt:
 He who sits in his closet, may joke about war—
 He may laugh at a scar while he wears a whole pelt.
 There you in the Champs Elysées seated down,
 Inspired by a bottle of prime Chambertin,
 May swear in a canticle, signed *Thomas Brown*,
 That up on a string every coward should hang.

* * * * *

DRINK OF THIS CUP.

AIR—*Paddy O'Rafferty.*

Drink of this cup—you'll find there's a spell in
 Its every drop 'gainst the ills of mortality—
 Talk of the cordial that sparkled for HELEN,
 Her cup was a fiction, but this is reality.
 Would you forget the dark world we are in,
 Only taste of the bubble that gleams on the top of it;
 But would you rise above earth, till akin
 To immortals themselves, you must drain every drop of it.
 Send round the cup—for oh there's a spell in
 Its every drop 'gainst the ills of mortality—
 Talk of the cordial that sparkled for Helen,
 Her cup was a fiction, but this is reality.
 Never was philtre form'd with such power
 To charm and bewilder as this we are quaffing;
 Its magic began when, in Autumn's rich hour,
 As a harvest of gold in the fields it stood laughing.
 There, having, by nature's enchantment, been fill'd
 With the balm and the bloom of her kindest weather,
 This wonderful juice from its core was distill'd,
 To enliven such hearts as are here brought together!
 Then drink of the cup—you'll find there's a spell in
 Its every drop 'gainst the ills of mortality—
 Talk of the cordial that sparkled for Helen,
 Her cup was a fiction, but this is reality.
 And though, perhaps—but breathe it to no one—
 Like caldrons the witch brews at midnight so awful,
 In secret this philtre was first taught to flow on,
 Yet—'tisn't less potent for being unlawful.
 What, though it may taste of the smoke of that flame,
 Which in silence extracted its virtue forbidden,
 Fill up—there's a fire in some hearts I could name,
 Which may work too its charm, though now lawless and hidden.
 So drink of the cup—for oh there's a spell in
 Its every drop 'gainst the ills of mortality—
 Talk of the cordial that sparkled for Helen,
 Her cup was a fiction, but this is reality.

'*Open the door softly,*' is turned to a love ditty, commencing "Down in the valley come meet me to-night;" and we shall only say of it, that it breathes of hot spice, and is calculated for the meridian of the warmest fashionable boarding-schools, where young ladies are taught—what they ought not—

To batten on *this moor.*

The next is in a higher and purer strain: we transcribe it with much gratification as a noble lyrical effusion, at once natural and deeply affecting.

OH, YE DEAD.

AIR—*Plough Tune.*

Oh, ye dead! oh, ye dead! whom we know by the light you give
 From your cold gleaming eyes, though you move like men who live,
 Why leave you thus your graves,
 In far off fields and waves,
 Where the worm and the sea-bird only know your bed,
 To haunt this spot where all
 Those eyes that wept your fall,
 And the hearts that bewail'd you, like your own, lie dead?
 It is true—it is true—we are shadows cold and wan:
 It is true—it is true—all the friends we loved are gone,
 But, oh! thus ev'n in death,
 So sweet is still the breath

Of the fields and the flow'rs in our youth we wander'd o'er,
 That, ere condemned we go
 To freeze mid HECLA'S* snow,
 We would taste it awhile, and dream we live once more!

The sweetness of the next air demands only another kind, but an equal amount, of praise.

ECHO.

AIR—*The Wren.*

How sweet the answer Echo makes
 To Music at night,
 When, roused by lute or horn, she wakes,
 And far away, o'er lawns and lakes,
 Goes answering light.
 Yet Love hath echoes truer far,
 And far more sweet,
 Than e'er, beneath the moonlight's star,
 Of horn, or lute, or soft guitar,
 The songs repeat.
 'Tis when the sigh in youth sincere,
 And only then,—
 The sigh, that's breath'd for one to hear,
 Is by that one, that only dear,
 Breath'd back again!

In the following, the thought is quite new to us, and, we believe, to song; nothing can be more tender, nor more poetically expressed.

OH BANQUET NOT.

AIR—*Planxty Irwine.*

Oh banquet not in those shining bowers,
 Where youth resorts—but come to me,
 For mine 's a garden of faded flowers,
 More fit for sorrow, for age, and thee.
 And there we shall have our feast of tears,
 And many a cup of silence pour—
 Our guests, the shades of former years,
 Our toasts, to lips that bloom no more.
 There, while the myrtle's withering boughs
 Their lifeless leaves around us shed,
 We'll brim the bowl to broken vows,
 To friends long lost, the chang'd, the dead.
 Or, as some blighted laurel waves
 Its branches o'er the dreary spot,
 We'll drink to those neglected graves,
 Where valour sleeps, unnam'd, forgot!

Having, what our Hibernian friends call *Dasency* before our eyes, we feel that it would be a blameable encroachment on the *Trio* (namely, Moore the author, Bishop the composer, and Power the publisher,) to whom we owe this publication, were we to quote beyond one other example. We shall not do More, lest we come under the excommunication of a Bishop, or become obnoxious to Power.

THEE, THEE, ONLY THEE.

AIR—' *Staca an Mharaga.*' (The Market-stake.)

The dawning of morn, the daylight's sinking,
 The night's long hours still find me thinking
 Of thee, thee, only thee.

* Paul Zealand mentions that there is a mountain in some part of Ireland, where the ghosts of persons who have died in foreign lands, walk about and converse with those they meet like living people. If asked why they do not return to their homes, they say, they are obliged to go to Mount Hecla, and disappear immediately.

When friends are met, and goblets crown'd,
And smiles are near, that once enchanted,
Unreach'd by all that sunshine round,
My soul, like some dark spot is haunted,
By thee, thee, only thee,

Whatever in fame's high path could waken
My spirit once, is now forsaken
For thee, thee, only thee.

Like shores, by which some headlong bark
To the ocean hurries—resting never—
Life's scenes go by me, bright or dark,
I know not, heed not, hastening ever
To thee, thee, only thee.

I have not a joy but of thy bringing,
And pain itself seems sweet, when springing
From thee, thee, only thee.

Like spells, that nought on earth can break,
Till lips, that know the charm, have spoken,
This heart, howe'er the world may wake
Its grief, its scorn, can but be broken
By thee, thee, only thee.

FROM THE BRITISH CRITIC.

THE CATERPILLAR.

From Kirby and Spence's Introduction to Entomology.

"In the beginning of spring, if you examine the leaves of your pear-trees, you will scarcely fail to meet with some beset on the under surface with several perpendicular downy russet coloured projections, about a quarter of an inch high, and not much thicker than a pin, of a cylindrical shape, with a protuberance at the base, and altogether resembling at first sight so many spines growing out of the leaf. You would never suspect that these could be the habitations of insects; yet that they are is certain. Detach one of them, and give it a gentle squeeze, and you will see emerge from the lower end a minute caterpillar with a yellowish body and black head. Examine the place from which you have removed it, and you will perceive a round excavation in the cuticle and parenchyma of the leaf, the size of the end of the tube by which it was concealed. This excavation is the work of the abovementioned caterpillar, which obtains its food by moving its little tent from one part of the leaf to the other, and eating away the space immediately under it. It touches no other part; and when these insects abound, as they often do to the great injury of pear-trees,* you will perceive every leaf bristled with them, and covered with little withered specks, the vestiges of their former meals. The case in which the caterpillar resides, and which is quite essential to its existence, is composed of silk spun from its mouth almost as soon as it is excluded from the egg. As it increases in size, it enlarges its habitation by slitting it in two, and introducing a strip of new materials. But the most curious circumstance in the history of this little Arab is the mode by which it retains its tent in a perpendicular posture. This it effects partly by attaching silken threads from the protuberance at the base to the surrounding surface of the leaf. But being not merely a mechanician, but a profound natural philosopher well acquainted with the properties of air, it has another resource when any extraordinary violence threatens to overturn its slender turret. It forms a *vacuum* in the protuberance at the base, and thus as effectually fastens it to the leaf as if an air-pump had been employed! This vacuum is caused by the insect's re-

* Forsyth on *Fruit Trees*, 4to. edit. 271.

treating on the least alarm up its narrow case, which its body completely fills, and thus leaving the space below free of air. In detaching one of these cases you may easily convince yourself of the fact. If you seize it suddenly while the insect is at the bottom, you will find that it is readily pulled off, the silken cords giving way to a very slight force; but if, proceeding gently, you give the insect time to retreat, the case will be held so closely to the leaf as to require a much stronger effort to loosen it. As if aware that, should the air get admission from below, and thus render a vacuum impracticable, the strongest bulwark of its fortress would be destroyed, our little philosopher carefully avoids gnawing a hole in the leaf, contenting itself with the pasturage afforded by the parenchyma above the lower epidermis: and when the produce of this area is consumed, it gnaws asunder the cords of its tent, and pitches it at a short distance as before. Having attained its full growth, it assumes the pupa state, and after a while issues out of its confinement a small brown moth, with long hind legs, the *Phalæna Tinea serratella* of Linné.*

Naturalists usually classify their works in conformity to the different tribes or families which they have to describe. Where one chapter is to treat of animals of the cow kind, and another of the tiger, this occasions no difficulty to ordinary readers. But an entomological work which should assume that the reader knew, or would take the trouble of learning, whether he ought to look for any insect, whose history he wished to read, in the chapter of Coleoptera, Stepsiptera, or Trichoptera, would be of little use to any who were not already adepts in the science. The attention of less zealous or less scientific observers is generally excited by some peculiarity in the habits or form of the insect which has fallen under their notice; and the same peculiarity will, generally, be found to have occasioned the selection of that insect for our authors' notice in the chapter descriptive of those habits to which the peculiarity belongs. A description which corresponds with his own observation, being thus easily found under its natural head, an unscientific person learns what may be called the official name of the insect, and can then, by comparing with its technical description, make himself master as far he chooses, of the terms of art necessary for advancement in the science.

For example, a young friend of the writer's returning one evening towards the close of the last summer from a walk in the woods, mentioned that he had observed the leaves of a tree of the poplar kind reduced to a fine net work by some black fat looking insects, which eat up all but the nerves of every leaf of which they had once taken possession; and that having accidentally touched one of these insects, he was astonished at the sudden appearance of two rows of pearls on each side of these little black creatures, which left a very strong aromatic smell, and then disappeared again. The description he gave of the insect was necessarily too vague to be very intelligible; but it was conjectured that this remarkable emission of a strong scent was intended to protect the insect, by disgusting a bird or other enemy, which might approach it to feed upon it. Looking therefore into Kirby and Spence's chapter, in their introduction to entomology, on the means of defence employed by insects, the little creature in question was readily ascertained to be the grub of the poplar beetle, *chrysomela populi*, by the following accurate description of the observed phenomenon.

"On each of the nine intermediate dorsal segments of its body is a pair of black, elevated, conical tubercles, of a hard substance; from all of these when touched the animal emits a small drop of a white milky fluid, the smell of which, De Geer observes, is almost insupportable, being inexpressi-

* Goeze *Natur. Menschenleben und Vorsehung*. Anderson's *Recreations*, ii. 409.

bly strong and penetrating. These drops proceed at the same instant from all the eighteen scent-organs; which forms a curious spectacle. The insect, however, does not waste this precious fluid; each drop instead of falling, after appearing for a moment and dispensing its perfume, is withdrawn again within its receptacle, till the pressure is repeated, when it re-appears."*

At another time, the writer, confined to his room by a broken limb, and enjoying the view of a delicious autumnal evening through his window, (when the scene without, though tantalizing, looks doubly beautiful) was surprised to see, what he took for the dead stalk of a clematis leaf, varying its angle of inclination to the branch from which it projected, as if by choice; for not a breath of air was stirring. A little reflection suggested to him, what his eye alone would not have detected, that the supposed dead spray must be a living caterpillar, and the imitation was so perfect, that a servant to whom the apparent dead leaf stalk was pointed out, with an order to take hold of that caterpillar gently, and bring it in, looked about in perplexity, not perceiving any thing like a caterpillar; and when, at last, he touched it, shrunk in some alarm, on its making a sudden and rapid move to avoid his finger. This insect had an unusual taste, for it fed not upon the green, but on the decayed leaves of the clematis; and its appearance was admirably adapted to prevent its being distinguished from those parts of the plant which it chose for its residence, as surrounded with its favourite food. It had not, however, escaped the notice of our authors; and the admirable adaptation of its form and attitude for the purposes of concealment, had procured for it a place under the same head, *of means of defence*.

"There is a certain tribe of caterpillars called surveyors (*Geometrae*), that will sometimes support themselves for whole hours, by means of their posterior legs, solely upon their anal extremity, forming an angle of various degrees with the branch on which they are standing, and looking like one of its twigs. Many concurring circumstances promote this deception. The body is kept stiff and immovable, with the separations of the segment scarcely visible; it terminates in a knob, the legs being applied close, so as to resemble the gem at the end of a twig; besides which, it often exhibits intermediate tubercles which increase the resemblance. Its colour too is usually obscure, and similar to that of the bark of a tree. So that, doubtless, the sparrows and other birds are frequently deceived by this manœuvre, and thus balked of their prey."

This caterpillar was put under a glass, to watch his transition into the pupa state; but he made his escape, and could not be found again for some time. At last he was discovered, acting the dead twig on a picture frame; not being aware, that a leaf stock projecting from a piece of polished ebony was as much calculated to excite attention, as its appearance on its native bush was to avoid it. The name surveyors, or geometers, has been given to these caterpillars in consequence of another portion of their habits, described in the chapter on the motions of insects.

"Many caterpillars that feed upon trees, particularly the geometers, have often occasion to descend from branch to branch, and sometimes, especially previously to assuming the pupa, to the ground. Had they to descend by the trunk, supposing them able to traverse with ease its rugged bark, what a circuitous route must they take before they could accomplish their purpose! Providence, ever watchful over the welfare of the most insignificant of its creatures, has gifted them with the means of attaining these ends, without all this labour and loss of time. From their own internal stores they can let down a rope, and prolong it indefinitely, which will enable them to travel where they please. Shake the branches of an oak or other tree in sum-

* De Geer, v. 291. Compare Ray's *Letters*, 43. See plate xviii. fig. 1.

mer, and its inhabitants of this description, whether they were reposing, moving, or feeding, will immediately cast themselves from the leaves on which they were stationed; and however sudden your attack, they are nevertheless still provided for it, and will all descend by means of the silken cord just alluded to, and hang suspended in the air. Their name of geometer was given them, because they seem to measure the surface they pass over, as they walk, with a chain. If you place one upon your hand, you will find that they draw a thread as they go; when they move, their head is extended as far as they can reach with it: then fastening their thread there, and bringing up the rest of their body, they take another step; never moving without leaving this clue behind them; the object of which, however, is neither to measure, nor to mark its path that it may find it again; but thus, whenever the caterpillar falls or would descend from a leaf, it has a cord always ready to support it in the air, by lengthening which it can with ease reach the ground. Thus it can drop itself without danger from the summit of the most lofty trees, and ascend again by the same road. As the silky matter is fluid when it issues from the spinners, it should seem as if the weight of the insect would be too great, and its descent too rapid, so as to cause it to fall with violence upon the earth. The little animal knows how to prevent such an accident, by descending gradually. It drops itself a foot or half a foot, or even less, at a time; then making a longer or shorter pause, as best suits it, it reaches the ground at last without a shock. From hence it appears that these larvæ have power to contract the orifice of the spinners, so as that no more of the silky gum shall issue from it; and to relax it again when they intend to resume their motion downwards; consequently there must be a muscular apparatus to enable them to effect this, or at least a kind of sphincter, which, pressing the silk, can prevent its exit. From hence also it appears, that the gummy fluid which forms the thread must have gained a degree of consistence even before it leaves the spinner, since as soon as it emerges it can support the weight of the caterpillar. In ascending, the animal seizes the thread with its jaw as high as it can reach it; and then elevating that part of the back which corresponds with the six perfect legs, till these legs become higher than the head, with one of the last pair it catches the thread; from this the other receives it, and so a step is gained: and thus it proceeds till it has ascended to the point it wishes to reach. At this time if taken it will be found to have a packet of thread, from which, however, it soon disengages itself, between the two last pairs of perfect legs.* To see hundreds of these little animals pendent at the same time from the boughs of a tree, suspended at different heights, some working their way downwards and some upwards, affords a very amusing spectacle. Sometimes when the wind is high, they are blown to the distance of several yards from the tree, and yet maintain their threads unbroken. I witnessed an instance of this last summer, when numbers were driven far from the most extended branches, and looked as if they were floating in the air."

The most noisy insects at present known, are the Gryllidæ, which comprehend the cricket, and grasshopper; and the Cicadæ, which also comprehend two genera, that divide the night and day between them; the great lantern fly, (called by the Dutch in Guinea, scare-sleep,) and the Τεττιξ or Cicada of the Greek and Latin writers. We generally render these words, *grasshopper*; but the insect is no more like a grasshopper, than a duck is like a frog. Either there is a farther impropriety, in supposing the Τεττιξ and Cicada to be the same; or the taste of the Græcians, in music, could not have been very delicate. For they called the noise of the Τεττιξ, and the sound of the harp by the same name, *τεττισμος*; Homer speaks of its voice as *οπα λειριόεσσαν*; and we are told, that when Eunomus and Ariston

* Reaum, ii. 375.

contended for a musical prize at Delphi, one of these insects flying to the former, and sitting upon his harp, supplied the place of a broken string, and procured him the victory. Dr. Shaw, on the other hand, assuming that the Cicada and *Τεττιξ* are the same insect, observes that the old men, whom Homer compliments as ἀγορηται ἐσθλοί, τεττίγεσσιν ἐοικότες, could have been nothing better than loud loquacious scolds. The Cicada, or *Τεττιξ*, says he, is perpetually stunning our ears with its most excessively shrill, and disagreeable noise. It is, in this respect, the most troublesome and impertinent of insects, perching upon a twig and squalling sometimes two or three hours without ceasing.* We could add, from our own experience, asseverations in support of the accuracy of the doctor's estimate, of the harmony resulting from the tiresome deafening squall of the Italian Cicada; but we had rather appeal to the delicate ears of Virgil, who has mentioned it twice, in terms which sufficiently mark, how unmusical the noise of these clamorous insects sounded to him.

"Raucis——

"Sole sub ardenti, resonant arbusta cicadis."

And,

"Et Cantu querelæ rumpent arbusta cicadæ."

The shrillness of the sound appears to have constituted the principal part of the annoyance, in Dr. Shaw's opinion. He probably little suspected, that had the sound been still more shrill, it might have made no more impression on his ears than perfect silence. We usually suppose, that the intensity or loudness of a noise is the only circumstance, on which its audibility materially depends; but that, of two sounds equally loud, a person, labouring under some degree of deafness, will hear the sharpest sound best. Now both these opinions have been ascertained by Dr. Wollaston to be only true within certain, and those by no means extensive limits. As far as he has been able to estimate it, he is inclined to conclude, that human hearing does not extend more than six octaves above the middle E of the piano forte; and that, as the ear grows dull from age, the power of receiving any impression from the sharper sounds, gradually descends in the scale. Of acute sounds, he finds that the piercing squeak of the bat, which he reckons to be five octaves above E, is so sharp, that some persons have never been capable of hearing it. The chirping of the gryllus, campestris, which is rather higher than the cry of the bat, is, therefore, near the limit, at which a greater number of ears cease to be capable of perceiving any sound. When this limit is reached, he believes, from the result of various trials, that the interval of a single note, between two sounds, may be sufficient to render the higher note inaudible, although the lower note is heard distinctly.

It is a proverbial saying in the west of England, that nobody hears a grasshopper after he is fifty. This coincides very well with Dr. Wollaston's theory; and implies, that the inability to hear an acute sound (of no inconsiderable loudness) had been observed to occur sooner than deafness is ordinarily expected, though it had not hitherto been noticed by physiologists. The reviewer, too, can well remember walking one evening with a near and dear relation, (whom he had not seen for some time) and being surprised and hurt to find, that she could not hear the chirping of a field cricket, which sounded to younger ears almost annoyingly loud. Yet a little conversation put an end to his uneasiness, by satisfying him that deafness (which he feared time had brought with it,) had yet made no inroad; and that the ears which had found music in his infant prattle, could still receive pleasure, from the same indulgent partiality, in hearing without difficulty the usual familiar tones of his voice.

* Shaw's Travels, second edition, page 186.

Having discovered that sounds, which rise above a certain degree of sharpness, must cease to make any impression on human ears, Dr. Wollaston ingeniously proceeds to open our views of the faculties which insects may not improbably possess, with regard to sounds, in the following remarks.

"Since there is nothing, in the constitution of the atmosphere, to prevent the existence of vibrations incomparably more frequent than any of which we are conscious, we may imagine that animals like the grylli, (whose powers appear to commence nearly where ours terminate,) may have the faculty of hearing still sharper sounds, which at present we do not know to exist; and that there may be other insects hearing nothing in common with us; but endued with a power of exciting, and a sense that perceives vibrations of the same nature, indeed, as those which constitute our ordinary sounds, but so remote, that the animals who perceive them may be said to possess another sense, agreeing with our own solely in the medium by which it is excited; and, possibly, wholly unaffected by those slower vibrations, of which we are sensible."*

TOMLINE'S LIFE OF PITT.

(Continued from p. 6.)

The circumstances in the public life of Mr. Pitt, after he was fairly embarked on the political sea, are related by the author with temperance and candour. It has been alleged against his volumes, that they partake too largely of the Annual Register, parliamentary debates, and other periodical works; but when we look at the exuberance of the press, the diligence with which every species of information is sought to be published to the world, and the very few matters even of a private nature which escape notice, we must confess that it would be impossible to produce a biography of this eminent statesman without these close coincidences and that general resemblance. We shall not pursue the thread of the narrative through the active parliamentary session of 1782; and only observe, that the bishop adds a note on the celebrated attack on the naval administration of lord Sandwich, asserting that the principle then avowed by Mr. Pitt, "never to suffer any private or personal consideration whatever to influence his public conduct at any moment," was "not merely an ebullition of youthful patriotism, but a principle to which he adhered through life."

Lord North's announcement of the resignation of ministers, in the House of Commons, on the night appointed for lord Surry's motion, is related, but without a very characteristic anecdote of that minister's happy temper, which we have heard attached to it. Members, expecting a very long debate, had ordered their carriages to return for them at two, three, and four o'clock in the morning; but his lordship's declaration rendering any discussion unnecessary, the House immediately broke up, in an evening unusually wet and tempestuous. Lord North's coach was waiting at the door; and as that good-humoured nobleman passed through the long file of those who had just turned him out of office, and who (huddled in crowds in the lobbies and passages, looking in vain for servants to call vehicles to take them through the pitiless storm) made a lane for the retiring premier, his lordship bowed pleasantly, right and left, and, mounting the steps, said, "*Adieu, gentlemen! you see it is an excellent thing to be in the secret!*"

The short Rockingham administration, which succeeded, terminated in a few months, with the death of lord Rockingham; and, about the middle of the year, lord Shelburne having accepted of office, Mr. Pitt, then little more

* Royal Society Transactions, 1820, page 314.

than twenty-three years of age, attained the important station of finance minister. In 1783, the famous motions on the peace, and the coalition between North and Fox, forced the ministry from their places. The author says:

"Mr. Eden, afterwards lord Auckland, was supposed to be the person who had the principal weight with lord North upon this occasion. He was called the father of the coalition; and I myself heard Mr. Sheridan attribute the coalition to him."

His majesty, at this period, offered to Mr. Pitt to succeed lord Shelburne as first lord of the treasury; but the strength of the coalition was too great to admit of his taking office with any chance of successfully carrying on the public business. The coalition parliament adjourned in July, 1783; and in September, Mr. Pitt, Mr. Eliot, and Mr. Wilberforce, went to France, where they stayed till the middle of October, residing chiefly at Rheims and Paris. This was the only visit Mr. Pitt ever made to the continent; and his character being well known in France, he was every where treated with great distinction.

Parliament met on the 11th of November; the India bill was soon brought in, and the consequence was, that it ousted the administration. Mr. Pitt readily accepted, in his twenty-fifth year, the office of being at the head of the treasury (which he had so resolutely resisted nine months before,) and came into power nearly for life. He "proceeded to fill up the different offices, in the best manner he could, though not exactly as he wished, and had reason to expect he might have done. Some persons of high rank and consideration, who agreed with him in political principles, without partaking in his firmness of mind, who applauded his conduct, but shrunk from responsibility, refused, in the present discouraging state of parties, and unpromising aspect of public affairs, to join in his administration; and those who looked only to the emolument of subordinate situations, declined connexion with a government which no one believed could last a month. At length, and after various disappointments, the arrangements were completed; and the cabinet consisted of Mr. Pitt, first lord of the treasury and chancellor of the exchequer; lord Thurlow, lord chancellor; lord Gower, lord president of the council;* the duke of Rutland, lord privy seal; lord Carmarthen and lord Sydney, secretaries of state; and lord Howe, first lord of the admiralty.†

These notes we have pleasure in quoting, as brilliant examples of exalted patriotism, and fine commentaries on the charge of a corrupt love of place, so indiscriminately laid against all distinguished men. Mr. Pitt's memora-

* "Afterwards marquis of Stafford. This peer had never had the slightest intercourse whatever with Mr. Pitt, but no one of his most intimate friends took a more decided part against the India bill: and when he understood the difficulty there was in filling up the cabinet offices, he sent a message to Mr. Pitt, by a confidential friend, that wishing to enjoy retirement for the remainder of his life, he could not be a candidate for office; but that, in the present situation of the king, and distressed state of the country, he would cheerfully take any office, in which it might be thought he could be useful. His name and experience were certainly of great service to Mr. Pitt, at the present moment. It is also due to the memory of this highly respectable nobleman, to add, that he afterwards gave up the presidentship of the council, and accepted the privy seal, an office inferior both in rank and emolument: this was done to make room for the introduction of lord Camden into the cabinet, who thought, that, having been lord chancellor, he could not with propriety accept any office but that of lord president of the council."

† "The duke of Richmond, who was master general of the ordnance, was not at first a member of the cabinet, wishing to confine himself to the business of his own office; but soon afterwards, when he was one of those who advised and encouraged Mr. Pitt to persevere in his struggle against a majority in the House of Commons, which he was aware was attended with considerable risk, he expressed his readiness to be in the cabinet, that he might take his share of the responsibility."

ble conduct on coming into power, is detailed in a clear manner; and, viewed altogether, is perhaps the most interesting portion of this work, and of that eminent person's life. It shows us what the energies of man will do when screwed to the "*sticking-place*;" and that the triumphs of a great mind, wrought up by circumstances to a manful struggle, may well be considered as beyond all previous calculation.

"On the first day (says his biographer) he appeared in the House of Commons, after his re-election, he was left in two minorities, the one of 39, and the other of 54; and five hostile motions were carried against him. The most reproachful terms which disappointed ambition and political animosity could suggest, were applied to his principles and his conduct; and he was denied those common civilities which had been hitherto invariably shown to the minister of the crown. Having written to the king, at Windsor, a general account of these proceedings, he received the following answer from his majesty:—'Mr. Pitt cannot but suppose, that I received his communication of the two divisions in the long debate, which ended this morning, with much uneasiness, as it shows the House of Commons much more willing to enter into any intemperate resolutions of desperate men, than I could have imagined. As to myself, I am perfectly composed, as I have the self-satisfaction of feeling I have done my duty. Though I think Mr. Pitt's day will be fully taken up in considering with the other ministers, what measures are best to be proposed on the present crisis; yet, that no delay may arise from my absence, I will dine in town, and consequently be ready to see him in the evening, if he should think that would be of utility. At all events, I am ready to take any step that may be proposed to oppose this faction, and to struggle to the last period of my life; but I can never submit to throw myself into its power. If they, in the end, succeed, my line is a clear one, and to which I have fortitude enough to submit.'

"Having found, at an interview, that firmness in his majesty, which his letter indicated, and being himself by no means alarmed, either by the number or by the violence of his enemies, Mr. Pitt determined, with the full concurrence of his colleagues, to persevere in maintaining his station."

For two months the new premier held on his firm unbending course; though embarrassed, not appalled by his trying situation, in being a minister of the crown, with constant majorities against him, in the House of Commons. It was during this period that he was elected a member of the grocer's company, and went to the city (which strongly supported him) with much eclat. Mr. Wilkes addressed a highly complimentary speech to him; and the author thus concludes the story of the day:

"When Mr. Pitt returned at night, he was attended, a considerable part of the way, by many respectable persons, besides an immense concourse of people. As the populace were dragging the coach, in which were himself, lord Chatham, and lord Mahon, up St. James's street, opposite to a club house, frequented by his political opponents, they were suddenly attacked by men, armed with bludgeons and broken chair poles, among whom, were distinguished several members of the club: some of the mob made their way to the carriage, forced open the door, and aimed several violent blows at Mr. Pitt, from which lord Chatham, at his own risk, was very instrumental in protecting him. At length Mr. Pitt and his companions, with great difficulty, made their escape to a neighbouring house, without any material personal injury to themselves; but their servants, and several persons who came to their assistance, were much bruised, and the carriage was nearly demolished."

At length Mr. Pitt's firmness, or obstinacy, as it has been denominated by his adversaries, prevailed: on the last division brought on by Mr. Fox, the majority was only *one*, and the next day the opposition to his measures was

abandoned. The close of the narrative fully illustrates this remarkable subject.

"Mr. Pitt sent to his majesty at Windsor, an account of what had passed this day in the House of Commons, and received the following answer:— 'Mr. Pitt's letter is, undoubtedly, the most satisfactory I have received for many months. An avowal on the outset, that the proposition held forth is not intended to go farther lengths than a kind of manifesto; and then carrying it by a majority of only one, and the day concluded with an avowal, that all negotiation is at an end, gives me every reason to hope, that by a firm and proper conduct, this faction will, by degrees, be deserted by many, and at length be forgot. I shall ever with pleasure consider, that by the prudence, as well as rectitude, of one person, in the House of Commons, this great change has been effected; and that he will ever be able to reflect with satisfaction, that in having supported me, he has saved the constitution, the most perfect of human formation.'

"On the following day the House went into a committee upon the mutiny bill; and when the chairman came to the clause which related to the duration of the bill, the secretary at war moved, that the blank should be filled up with the words, 'from the 25th day of March, 1784, to the 25th day of March, 1785,' in order that the bill should be in force for the usual period of one year. Sir Matthew White Ridley, who had constantly voted with the majorities against Mr. Pitt, immediately said, 'that he and those with whom he had acted, would that day prove, how false the reports were, that they intended to stop the supplies, throw out the mutiny bill, and plunge the nation into anarchy and confusion.' He asserted the purity of his motives, in the part which he had lately taken; he was now compelled to confess, he said, that the House was defeated, and to acknowledge that the minister had triumphed by means of the people, who had decidedly expressed their sentiments in his favour; and therefore he was resolved to withdraw himself from his attendance in a House, which had been sacrificed by its constituents to the prerogative of the crown.

"Mr. Powys, who in the beginning of the contest, had voted with Mr. Pitt, but in the course of it had taken a different line, followed sir Matthew White Ridley, and 'acknowledged with regret, that, notwithstanding the manly stand made by the majority, of which he had the honour to be one, Mr. Pitt had conquered the House of Commons, and that he held his situation in defiance of their addresses: he gave him credit for his firmness; he had carried the point he had undertaken. The House was, indeed, conquered; for, though a vote of the Commons could once bestow a crown, it could not now procure the dismissal of a minister. As he had been often charged with inconsistency, he would this day give some force to that charge, by voting for a long mutiny bill, and thereby putting it in the power of ministers to dissolve parliament; a measure, which, for some time past, he had been endeavouring to prevent. He was willing to let ministers run their mad career; he was convinced, that a dissolution would be ruinous; but the Commons were conquered, and it would be in vain for him to oppose a triumphant minister, full of confidence in the troops that surrounded him. He had once, he said, given a description of the forces that opposed the present administration; he would now, with the leave of the House, describe those that were led by the right honourable gentleman on the treasury bench. The first might be called his body guard, composed of light young troops, who shot their little arrows with amazing dexterity against those who refused to swear allegiance to their chief. The second might be called the corps of royal volunteers, staunch champions for prerogative, ever ready to fall with determined valour upon those who should dare to oppose privilege to prerogative. The third was a legion composed of deserters, attach-

ed to their leader by no other principle than that of interest, and who, after having deserted *to* him from that principle, would desert *from* him upon the same grounds, when they saw their interest would suffer, if they should stand by him. Such were the component parts of the army, which had triumphed over the House of Commons, and conquered the constitution.' He then gave an account of the unsuccessful attempts made to effect an union of parties, in which he had taken an active share."

Thus Mr. Pitt finally succeeded in overcoming his opponents in the House of Commons, which he could not have done, had he not had his royal master, the House of Lords, and the people, strenuously with him. One of the king's letters on the occasion is well worthy of attention, in the lower house, as it is *now* composed.

"Upon one occasion, his majesty wrote to Mr. Pitt, "I cannot conclude without expressing my fullest approbation of the conduct of Mr. Pitt, on Monday; in particular his employing a razor against his antagonists, and never condescending to run into that rudeness, which, though common in that house, certainly never becomes a gentleman; if he proceeds in this mode of oratory, he will bring debates into a shape more creditable, and correct that, as well as I trust many other evils, which time and temper can only effect."

Our next quotation is made merely for the sake of its historical value.

"Mr. Fox commanded a majority in the House of Commons, with which immense advantage he openly asserted, that his immediate return to office was certain and inevitable; and he probably flattered himself, that he should derive additional strength from the failure of the attempt to exclude him from power. He might naturally imagine, that the youth and inexperience of Mr. Pitt, would not dare to resist a majority of the House of Commons, to which every other minister had instantly yielded; and he might hope, that Mr. Pitt's acceptance of office under such circumstances, and his compelled relinquishment of it after so short a time—a consequence which would then have been represented as obvious to every one but himself—would fix upon him the imputation of rashness and presumption, and operate in a manner injurious to his character. Here Mr. Fox was again disappointed. He prevailed indeed, as far as a majority was concerned, in every motion which he made in the House of Commons, for two successive months; but the most hostile resolutions against ministers, and the most importunate addresses to the throne, equally failed of producing their desired effect. Mr. Pitt persevered, boldly avowing his determination not to resign; and his majesty was no less firm in refusing to dismiss him. In the mean time, the people gave the most unequivocal proofs of their approbation of Mr. Pitt's conduct, and as strongly condemned that of his opponents. Public opinion must ever affect the votes of the House of Commons. Mr. Fox's majorities gradually decreased; and the plain intimations, which he received from some of his most respectable supporters, convinced him, that if he proceeded to acts of greater violence, he should experience and proclaim the loss of that confidence, which had been his proudest boast, and the ground of all his pretensions. Unable, therefore, to take any farther step, without resource and without alternative, he felt himself under the humiliating necessity of giving up the contest, and of submitting to the rising fame and wonderful talents of a man, whose opposition, at the beginning of the struggle, he had considered as by no means formidable, and who was not only much younger than himself, but of an age at which no one had ever before attained either the same weight in parliament, the same situation in government, or the same popularity in the country. And to complete Mr. Fox's mortification, he could not but foresee, that the dissolution of parliament, which he had reason to expect would soon take place, must, in the

present state of the public mind, still more diminish his own influence, and confirm the power of his rival."

Upon this branch of the subject, the bishop thus finishes his reflections.

"I am aware, that in the present and in the former chapters, I have frequently mentioned Mr. Pitt's age; but as this is a peculiar and characteristic circumstance, clearly pointing out his superiority to every other political man that ever existed, I shall, I trust, be pardoned for the repetition. The most eminent statesmen, both in ancient and in modern times, in this and in other nations, were scarcely known at the age of twenty-five; and we have seen what situations Mr. Pitt filled, what powers he displayed, and what reputation he acquired, before he arrived at that period of life. He was not only at once the accomplished orator, but exhibited such maturity of understanding and correctness of judgment, with so perfect a knowledge of every subject, foreign, and domestic, which came under consideration, and proved himself so entirely competent to all the arduous duties of his high station in the senate, in the cabinet, and in the detail of official business, without the preparation and experience which other men had invariably acquired, that his political opponent, lord North, pronounced him 'born a minister;' and Mr. Gibbon declared, that 'in all his researches in ancient and modern history, he had nowhere met with his parallel, who, at so young a period of life, had so important a trust reposed in him, which he had discharged with so much credit to himself, and with so much advantage to the kingdom.'"

(To be continued.)

THE OLD MAID'S DIARY.

Yrs.

15. Anxious for coming out, and the attention of the men.
16. Begins to have some idea of the tender passion.
17. Talks of love in a cottage, and disinterested affection.
18. Fancies herself in love with some handsome man who has flattered her.
19. Is a little more difficult in consequence of being noticed.
20. Commences fashionable and dashes.
21. Still more confidence in her own attractions, and expects a brilliant establishment.
22. Refuses a good offer because he is not a man of fashion.
23. Flirts with every young man she meets.
24. Wonders she is not married.
25. Rather more circumspect in her conduct.
26. Begins to think a large fortune not quite so indispensable.
27. Prefers the company of rational men to flirting.
28. Wishes to be married in a quiet way with a comfortable income.
29. Almost despairs of entering the married state.
30. Rather fearful of being called an old maid.
31. An additional love of dress.
32. Professes to dislike balls, finding it difficult to get good partners.
33. Wonders how men can leave the society of sensible women to flirt with chits.
34. Affects good humour in her conversation with men.
35. Jealous of the praises of women.
36. Quarrels with her friend who is lately married.
37. Thinks herself slighted in society.
38. Likes talking of her acquaintance who are married unfortunately, and finds consolation in their misfortunes.
39. Ill nature increases.

40. Very meddling and officious.—N. B. A growing penchant.
41. If rich, as a dernier resort, makes love to a young man without fortune.
42. Not succeeding, rails against the sex.
43. Partiality for cards, and scandal commences.
44. Severe against the manners of the age.
45. Strong predilection for a Methodist parson.
46. Enraged at his desertion.
47. Becomes desponding, and takes snuff.
48. Turns all her sensibility to cats and dogs.
49. Adopts a dependent relation to attend on her.
50. Becomes disgusted with the world, and vents all her ill humour on this unfortunate relation.

Literature.

PREPARING FOR PUBLICATION IN ENGLAND.

An Enquiry concerning the Primitive Inhabitants of Ireland, from the pen of Dr. Wood, author of the Prize Essay on Irish History and Antiquities.

Dr. E. Nares is employed upon a continuation of Professor Tytler's Elements of General History, from the deaths of Queen Anne and Louis XIV, to the present time.

Travels in Palestine, in 1816, by J. S. Buckingham, Esq. will speedily appear.

Mr. Brande's Manual of Chemistry, enlarged to 3 vols. 8vo.: and Mr. Mackenzie's Thousand Experiments in Chemistry and the useful Arts, will appear in a few days.

The famous Century of Inventions of the Marquis of Worcester, from the Original MSS. with historical and explanatory notes, a biographical memoir, and an original portrait, will soon appear.

A Poem on a very interesting subject of Woman in India, is announced, by John Lawson, Missionary at Calcutta, and author of Orient Harping.

Science.

Compiled for the National Recorder.

THE NORTHERN EXPEDITION.

The following particulars of the expedition on the eve of sailing, will, we trust, be acceptable.

The officers of the *Fury* are Captain Parry, Lieuts. Nias and Reid, Mr. Edwards, surgeon, and Mr. Sheoch, assistant surgeon, and Mr. Hooper, purser; Mr. Fisher, astronomer, and Mr. Allison, Greenland master. The midshipmen are Messrs. Ross, Henderson, Buchanan and Crowley; Mr. Halse, captain's clerk, and a Greenland mate: the whole complement, including officers, being 61. In the *Hecla*, Captain Lyon, Lieuts. Hoppner and Palmer, Mr. Alexander Fisher, surgeon, and Mr. McLaren, assistant surgeon; Mr. Jermaine, purser; Mr. Fyle, Greenland master; and Messrs. Richards, Griffiths, Bird and Shearer, midshipmen; Mr. Mogg, captain's clerk, and a Greenland mate; the whole crew, including officers, being 60. This vessel has no astronomer.

In addition to the preparations which were made for the last voyage to guard against the cold, the vessels are now lined with cork all round

the inside, and have also an apparatus by a Mr. Sylvester, for conveying heated air all round the lower deck, and a small branch from the main pipe, opening into each of the officers' cabins. They take out no salt beef; but, in lieu of it, a large quantity of beef, veal, and mutton, preserved by Messrs. Donkin and Co.'s process. In other respects, the provisions are the same as in the last expedition, only that there is a larger quantity; each ship being provided with stores and provisions for three years. They have also more coals: for each vessel takes 115 chaldron. The Nautilus, a hired transport, is to accompany them as far as Davis' Strait, in order to carry out part of their fuel and stores, &c.; and it is reported that another vessel is to be sent to Behring's Strait, in the course of next year, to meet them there, should they succeed in penetrating to the Pacific, with an additional supply of such articles as may be deemed necessary. If the wind permitted, they were to drop down to Woolwich on the 27th, there to take on board their powder and ordnance stores; and thence to proceed, most probably, this day to the Nore, where the men are to be paid three months' pay in advance, in order to enable them to furnish themselves with clothes, and other necessaries for the voyage.

Chrystallo-Ceramic Manufacture, or Glass Incrustations.—This may be deemed a very important discovery for the arts of design and embellishment. The effect is novel and singularly elegant; for the ornament whether painted in metallic colours, or left plain, instead of being placed externally, either *en creux*, or in relief, or being painted upon the surface of the glass, is actually incrustated with that substance, and is thus more effectually secured from injury. Hitherto, the modes employed for forming patterns and devices on glass, are all more or less defective: the effect is either meagre or confused; not unfrequently both; vases, cups, &c. of this material have been more admirable for their pellucidity and brilliancy, than for purity of form or elegance of design; but this invention will create a new era in the manufacture of this useful article. Classical figures and devices will now be employed, and elegance of form as much studied as in vases modelled after the antique. The effect is considerably heightened by the jar or vase being filled with some brilliant liquid, similar to those displayed by chemists, for the figures and ornaments being opaque, they have then very much the appearance of being raised on a coloured ground, yet with a certain undefinable peculiarity of look that sufficiently distinguishes them so as to form another species of ornament.

Scientific Travels in Brazil.—Drs. Spix and Martin, members of the Academy of Sciences, at Munich, returned last autumn from their travels in Brazil, undertaken for the purpose of exploring the natural curiosities of that region. They brought home with them a very extensive collection of rare specimens in natural history, the fruit of their researches; and the publication of their travels is looked forward to, with considerable expectation, by naturalists and men of science.

For Ships.—A patent has been granted to William Wood of Bow, Middlesex (Eng.), shipwright, for the manufacture and application of a new material for the more effectually rendering ships and other maritime vessels, water-tight and sea-worthy.

The patentee has discovered that a light felt of hide hair, or mixture of hide hair and wool, when saturated with tar, is highly elastic and water-proof, and conceiving the useful application of the substance as a lining for the sheathing of ships, he manufactures it in an expeditious and economical manner, in sheets of suitable size for that purpose; such sheets being attached to the external sides and bottom of the ship by simply nailing with scupper

nails, are covered with their planking. The substance he terms adhesive felt. It possesses the property of elasticity in so considerable a degree as to stretch uniformly without fracture or injury either to its texture, or its complete impermeability to water, whenever the ship's seams are opened by straining in hard weather, or in the more dangerous cases of the starting of planks or breaking of timbers, as in stranding. In all such cases, when with the usual mode of sheathing water would necessarily be admitted to the certain destruction of the vessel, this material forms an impenetrable and elastic case or garment for the whole ship's bottom, and in the case of the opening of seams by straining, it recovers its first dimensions with the return of the part so opened, or the release of the strain; in such cases it generally fell into the openings in a certain degree so as to render them afterwards more secure against a recurrence. He also finds it to be a complete protection against every description of worm in all climates; this destructive animal is never known to penetrate the material in the slightest degree. The material hair, or hair and wool is prepared for felting by the operation of dressing and bowing, as in the practice of hat-making, and is felted in the usual manner. Sheets or portions thus felted, are dipped into melted tar and pitch in certain stated proportions to each other, and then undergo a slight compression to take away the extraneous or dripping quantity of the material; they are then exposed for a short time to dry and cool, and are then considered fit for use.

The patentee uses mechanical arrangement, by which the usual labour of dressing and bowing is greatly reduced, and which also effects in a very simple and expeditious manner the uniform delivery of the dressed and bowed or prepared material in the precise quantity, and in the proper figure for felting for each sheet. The same material is also applied with the same advantage to the caulking of seams, and as far as regards impermeability to water, the application renders every vessel a perfect life boat. It is considered by all nautical men who experience its use as the most solid improvement in ship-building of modern times, and to bid fair to make an epoch in the art.

Pit Coal.—Count G. Sternberg, an enlightened botanist, and proprietor of a considerable coal mine in Bohemia, has been, during fifteen years, making scientific observations on the strata of pit coal. He has, in consequence, acquired a valuable collection of fossile trees, plants, and grains, the forms of which are in good preservation. This gentleman is now publishing, at Leipsic, the result of his observations, under the title of an "Essay towards a Botanical and Geological Flora of the Primitive World." The first number contains thirteen plates, engraved by Sturm, of Nuremburg, and accurately coloured. The plants represented bear no resemblance to any that are now known.

The magnificent copper mine at Dolcoath in Cornwall, employs under ground 750 persons, consumes monthly 3000 lbs. of gunpowder, and 5000 lbs. of candles. It is 1400 feet deep, and contains in it 7,000,000 of cubic feet of excavated space. The pumps bring up daily from this mine 120,000 cubic feet of water.

Test for Barytes and Strontia.—These earths may be readily distinguished from each other by the following process:—Make a solution of the earth, whichever it may be, either by nitric, muriatic or some other acid, which will form a soluble salt with it; add solution of sulphate of soda in excess; filter and then test the clear fluid by subcarbonate of potash. If any precipitate falls down, the earth was strontian: if the fluid remains clear, it was barytes.

Agriculture.



"Let us cultivate the ground, that the poor, as well as the rich, may be filled; and happiness and peace be established throughout our borders."

ON THE HESSIAN FLY (*cecidomyia destructor*,) AND PROPER COURSE
OF CROPS.

Read before the Agricultural Society of Bucks County.

Sharon, 1st June, 1821.

Sir—In tracing the history of the Hessian fly (*Cecidomyia destructor*,) for the past year, 1820, as laid down in my communication of the first of February last, I omitted that part which relates to its evolution from the straw about the barn, and therefore the present is principally intended to supply that defect, and to offer some observations growing out of it. The insect first appeared in the winged state in the house on the twentieth of February (the weather being then moderately warm,) and continued to be seen occasionally, or whenever the weather was in a suitable state, until the opening of spring; indeed in a room where fire was kept, I saw it on some quite cold days; but the number was so inconsiderable, that no injury need be apprehended. I must then call the attention of the society to the stubble fields as heretofore recommended; for I am now satisfied, that the insect can be so crippled, as to be rendered harmless to our crops; but to insure success, all must adopt the same plan: this indeed is a great difficulty, because the case has been given up as irremediable. It should not, however, discourage us, as difficulties ought always to stimulate to greater action, and the importance of the subject before us, demands our every exertion; besides, I am persuaded that our purpose can be easily accomplished. If such a rotation of crops can be devised, as will admit the ploughing in the stubble at the proper season, and which will yield as great profits as our present course, independent of the destruction of the fly, surely every one will be willing to try the experiment; inasmuch as it will be risking nothing for a prospect of great gain. My plan is already submitted generally, but it may be well to state it more particularly, and confine it to that part, in which alone my confidence is now placed; that is, plough in the stubble immediately, or soon after harvest; then harrow the ground in the same direction that it was ploughed; which will destroy a large proportion (in the pupa state,) and will cause plants to spring up, sufficient to receive the deposit of any flies that may escape the ploughing, or evolved from the straw that was stacked or housed; suffer those plants to grow till near the time of putting in the wheat crop; then plough again, and the work of destruction will be finished; or if the ground is not intended for grass

or winter grain, the last ploughing may be done at any time during the fall; for although some of the pupa might change to the fly state, yet, it being the habit of the insect to deposit its progeny on the nearest plants that are suitable, and as there would be ample provision at hand, there would be no necessity for it to remove from the stubble fields. Rye and barley stubbles must also be attended to, and plants growing about stack-yards and barracks should not be neglected. The course of crops that I would propose is, first, wheat; second, corn; third, oats and clover. The sod to be broken up for wheat, the first ploughing being shallow and done in hot weather, a decomposition of the vegetable matter in the soil will immediately commence; and when sufficiently advanced, give a second and deep ploughing, and harrow as occasion may require; just before putting in the crop, give a third and very shallow ploughing; begin sowing the last week in September, so as to finish the first in October, or if it were possible, I would sow the whole on the first day of October; because prior to that period, the insect appears in such quantities, as to do considerable injury during the fall, and is stationed for a second attack in the spring; whereas, afterwards, the number is not sufficient to make any serious impression; but it is not safe to postpone the sowing much beyond that time, as the young plants would be more likely to perish by the winter, than the fly; and the wheat that is in a backward state in the spring, is more subject to attack and less able to resist it. The farmers in this neighbourhood generally agree, that the time here mentioned is the proper time of sowing, and the growing crop fully evinces its truth. The lot I had sowed on the thirtieth of August, is entirely cut off; and some sown by my neighbours about the 20th of September, will scarcely yield a crop worth cutting; such as was sown the last of September and first of October, promises well, and that sown later is much injured, except where it was highly manured. The time of sowing in other places, should be regulated by climate or actual observation. Thus managed, I believe a good crop may be calculated on, even without manure; but it is said by some to favour the increase of garlic; it might be so in the first instance; but taking the whole course into view, I do not think it would have that tendency, and in order to remove the objection entirely, it would only be necessary to commence the system, by breaking up the ground at a time when the garlic was in a growing state, or by pasturing the garlic in the early part of the season with sheep. I would apply the manure to the corn crop, either by spreading it upon the wheat stubble, and immediately ploughing it under, or putting it on in the spring. The oats crop should be put in as early in the season as practicable, and directly after harrowing sow clover: it has been found when sown early, to take quite as well as with wheat: let the clover remain one year, then turn it in for a wheat crop, and continue this course on the same ground, until it shall be completely cleaned of all trash; then sow some more permanent kind of grass, and suffer it to rest, in order to plough up that part of the farm which had been under grass. Thus dividing the farm between grass and tillage land, and changing as occasion may require; but when the farm becomes cleared of all noxious weeds and other pests (and perhaps it is the best way to clear it), that part appropriated to grass ought not to be broken up oftener than may be found necessary; as it will take several years to get well set with natural grass; which is much to be preferred to the artificial grasses, especially for pasturage; indeed with top-dressing occasionally, and sometimes scarifying, the ground need scarcely ever be ploughed. That part allotted to grains and clover, might be worked in the manner abovementioned, any length of time, with improvement to

the soil; and under that management, not only the ravages of the Hessian fly will be prevented, but the worm that takes its lodgement in the cavity of the stalk (as stated in my address to the society) will share the same fate; for the egg that produces it, is deposited about the same time as that of the fly; and further, our grain crops will probably be exempt from the attacks of most other insects; at any rate I am persuaded, that our corn would not be injured by the cut worm, as its parent deposits its progeny among grass; and the natural green or spear grass, which I propose to be chiefly attended to, would not be much injured; besides, the spider which I presume is the cause of the salivary disease of animals would not be likely to lodge in that species of grass, or rather it would prefer the clover; and by ploughing that crop in, we should destroy it: or if, as some imagine, that the disease is caused by the animal's feeding on a plant called *euphorbia maculata*, which is said to be common on pasture grounds, that plant would soon be rooted out by the natural grass; and in either case we should get rid of the evil.

If then the system which I here propose, shall effect any one of the contemplated objects, the gain to the community will be truly great; and incalculably so, if it should result in the complete realization of the whole. I am not however tenacious of my plan or course of cropping; I only offer it for consideration: let others pursue their views, and by giving the result of their experience, we may adopt that which is best. My great or leading object is, to destroy or cripple the fly while in the stubble fields, where it is completely exposed and in our power, and in my opinion the only point that can be attacked with success; and therefore I call upon every friend of agriculture, who is engaged in the culture of wheat, rye or barley, to unite in it. Yours, very respectfully,

JAMES WORTH.

JOHN LINTON, esq.

Chairman of the Committee on Entomology.

*Extract of a Letter from Thomas G. Kennedy to James P. Morris,
Chairman of the Committee on Fruit and Forest Trees.*

Read before the Agricultural Society of Bucks County, February 12, 1821.

"The pine and cedar are said to be among the most difficult to grow on being transplanted; last spring I had wished to plant some pines, but could not conveniently procure any: that my fancy should in some degree have its humour, I procured a few of the common cedar from the woods, and planted them about the usual time of transplanting trees. Several of my neighbours predicted that they would not grow, and indeed I found this prediction verified with regard to most of them, except six which I planted in a small enclosed yard, that was shortly afterwards sodded: these all grew finely, and appeared to have suffered but little if any from their removal: they were occasionally watered, but not more than those round which there were no sods nor grass growing, and which subsequently perished. If then, the inference that the trees were kept alive and their growth facilitated by a degree of moisture being retained about their roots by the covering of sod and grass, which would otherwise have been evaporated by exhalation, be a correct one, may it not furnish a hint by which we may sometimes be saved a good deal of vexation and disappointment, if nothing more. At all events the experiment is an easy one, and it possesses this to recommend it, which unfortunately all experiments do not, *that it costs nothing.*"

Record.

Since the adoption of the new Spanish constitution, it is the rule in the Havana, to visit the prisons once in every month, for the purpose of preventing the dreadful oppressions which have frequently, and perhaps generally, been practised therein. The following account, translated from one of the late papers of that city, will show the good effect and the necessity of such a practice.

"In the visit made by the governor, on the 18th April, to the prisons of the Moro Castle, he observed the horrible dungeons called by the different names of the Sun, the Moon, the Star, the Tiger, and the Lion, &c. heretofore constructed for the affliction of humanity: he was astonished that such means of cruelty and barbarity should be still in existence, notwithstanding the order given by the former governor prohibiting their use; ordered that they should be immediately closed up with substantial work of lime and stone, for the purpose of preventing for the future any such abuse.

New Haven, (Conn.) June 30.

Sepulchral Rites.—Tuesday last was the day fixed on by the committee appointed by the citizens for that purpose, to commence the removal of the monuments from the ancient to the new burial ground. Agreeably to previous notice, at about eight o'clock in the morning, a very numerous concourse of persons assembled in the Centre meeting house for the purpose of attending religious service on this very interesting occasion. The exercises were performed in the following order: the Rev. Mr. Taylor read a hymn; the Rev. Mr. Mervin read a portion of scripture, and offered up a devout prayer; the Rev. Mr. Hill delivered an appropriate and impressive address; the Rev. Mr. Thacher made a short and solemn address, and read a hymn. Soon afterwards the removal of the monuments was begun, and continued until the whole were removed, except the stones which denote the graves of Dixwell and Whalley, two of the judges of king Charles. We understand a marble tablet will be erected with suitable inscriptions, as a memorial to inform the passing stranger that the adjoining ground was used as a common place of burial from the first settlement of this town to the year 1796. The monuments are arranged in the new burying ground in alphabetical order.

There is no fact which we publish this week, more interesting and extraordinary, than the appearance of shad in the Ohio river. No instance, we believe, has before occurred of that fish being taken in the western waters. It is probable, we think, that the numerous obstructions placed in our eastern rivers, for the purpose of improving the navigation and for mills, have driven them to the necessity of seeking new haunts and more eligible places to deposite their young. Many years ago shad were abundant in our Brandywine, but none have appeared in it for a long time. The salmon was so abundant twenty-five years ago in the Connecticut river, that the fishermen would not sell an hundred shad unless the purchaser would take a reasonable proportion of salmon at a few coppers per pound. I well remember when the stage from Hartford to Norwich had a large piece of bagging fastened underneath the body for the purpose of bringing salmon from the former to the latter place. But this delicious fish is no longer known in those waters. Perhaps they may make their appearance in the Mississippi and Ohio. In Lewis and Clark's journey to the western ocean, they speak of the abundance of salmon taken near the Rocky Mountains in the Columbia river. Would

it be possible [or is the distance too great] to bring some of them across, and place them in the head streams of the Missouri? But this is rather a remote speculation. We congratulate our good friends in Ohio, Indiana, and other western states, on the acquisition. [*Vill. Rec.*]

The Portuguese Cortes have prohibited the importation of all kinds of grain and flour, except barley. The prohibition, as respects the United States, took place on the 28th June.

On the 25th June, the dam across the Schuylkill, at Fair Mount, was closed.

About the middle of last month, fifty-eight free negroes passed through Washington, in this state, on their way from Virginia, to join a settlement of the same description of persons, formed some time since in Brown county, Ohio. They formerly belonged to the estate of Mr. Samuel Gist, who at his decease (several years ago, in England,) manumitted his slaves, in number about nine hundred, and left them much property. They had with them three wagons to carry their baggage.

Mr. John Lewis Krimmel has been employed by sundry gentlemen of Philadelphia to execute an historical painting of the landing of William Penn and his companions at Newcastle, on the 24th of October, 1682. The artist is allowed eighteen months to finish the picture, which is to be six feet in height and nine feet in breadth.

After an exhibition of the same six months in the city of Philadelphia, for the benefit of Mr. Krimmel, it is to be presented by the subscribers to the Pennsylvania Academy of Fine Arts.

Variety.

THE BEWITCHED LIEUTENANT.

In 1817, a very corpulent gentleman, a lieutenant of the royal navy, applied to the lord mayor of London, under the following circumstances. He stated, that the lady of the house where he lived, her daughter, and several of the lodgers, had conspired to deprive him of his existence, by means of "electricity and the attractive power;" that they had utterly deprived him of his ancle bones, the nobs of his wrists, and had superinduced a consumption. His lordship remarked, that his appearance by no means warranted that conclusion; but he assured his lordship, that his rotundity was occasioned by their contrivances, and that it consisted entirely of inflammable matter; that they had cut three setons in his neck, bled him four times on the arm with lancets, and seven times on the forehead with leeches, and that the young lady had applied the attractive power with so much violence, as to extract two of his teeth! which teeth he produced in court, in corroboration of the fact; at the same time he handed up a voluminous written statement of his grievances, and concluded by claiming the protection of his lordship.

The lord mayor remarked, that he did not see how he could interfere with the attractive powers of the young lady, though she had used them with such strong effect.

The lieutenant said, it was not against this particular family only he had to complain, but that multitudes were in the habit of tormenting him with a tube and a spring, and other vile contrivances, and it was lamentable and scandalous to see a great nation conspiring against an individual who had served his country in so many battles.

Poetical Lottery! Capital Prize!—We observe the following advertisement in a New York paper. Mrs. P. is the fashionable confectioner of that city.—*N. Intel.*

"To Poets.—Whereas the printed mottos which now envelop the kisses and comfitures that are handed about at parties, are so devoid of taste, so unpoetic, and so inelegant, that Mrs. Poppleton, desirous of combining delicacy and talent, and giving an impulse to poetic merit hereby offers a *Prize Cake of Ten Pounds* for the best one hundred original mottos which shall be handed to her in one month from the date hereof, to be decided by ladies and gentlemen of poetic taste."

SENTENCES,

Selected by the Retrospective Review, from Fuller's Holy and Profane States.

Heat gotten by degrees, with motion and exercise, is more natural, and stayes longer by one, than what is gotten all at once by coming to the fire. Goods acquired by industry prove commonly more lasting than lands by descent.

Dissolute men, like unskilful horsemen, which open a gate on the wrong side, may, by the virtue of their office, open Heaven for others, and shut themselves out.

Reasons are the pillars of the fabric of a sermon, but similitudes are the windows which give the best light.

'Tis a shame when the Church itself is a cœmeterium, when the living sleep above ground as the dead do beneath.

Conjectures, like parcels of unknown ore, are sold but at low rates. If they prove some rich metal, the buyer is a great gainer; if base, no loser, for he payes for it accordingly.

A public office is a guest which receives the best usage from them who never invited it.

Scoff not at the natural defects of any, which are not in their power to amend. Oh! 'tis cruelty to beat a cripple with his own crutches.

Good company is not only profitable whilst a man lives, but sometimes when he is dead; for he that was buried with the bones of Elisha, by a posthumous miracle of that prophet, recovered his life by lodging with such a grave-fellow.

Anger is one of the sinews of the soul: he that wants it hath a maimed mind.

Generally Nature hangs out a sign of simplicity in the face of a fool, and there is enough in his countenance for an Hue and Crie to take him on suspicion, or else it is stamped in the figure of his body; their heads sometimes so little that there is no room for wit, sometimes so long that there is no wit for such room.

They that marry ancient people, merely in expectation to bury them, hang themselves in hope that one will come and cut the halter.

He that impoverisheth his children to enrich his widow, destroys a quick hedge to make a dead one.

EPIGRAM

On the Grasshopper displayed over the Royal Exchange.

In the hot bed of War, how briskly they bred,
As warm'd by Corruption, they revell'd and fed;
But chang'd is the season, and now there's a dearth,
Of paper prosperity, discounts and mirth!
The *Grasshopper* then is the emblem that fits,
And well it describes these improvident Cits—
They feast, in like manner, they cut and they carve,
For singing all summer, all winter they starve.